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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/532,444	10/14/2005	Hisashi Onuma	5404/103	1785
757 7590 11/14/2007 BRINKS HOFER GILSON & LIONE P.O. BOX 10395 CHICAGO, IL 60610			EXAMINER MULLIS, JEFFREY C	
			ART UNIT	PAPER NUMBER
			1796	
			MAIL DATE	DELIVERY MODE
			11/14/2007	PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

## Office Action Summary

Application No.

10/532,444

Applicant(s)

ONUMA ET AL.

Examiner

Jeffrey C. Mullis

Art Unit

1796

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 09 January 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-5 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-5 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date 4-25; 1-06
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

Claims 1-5 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The term "amorphia form" as recited in at least claim 4 is not art recognized and is therefore unclear.

The term "substantially" is subjective and is therefore unclear.

The "ratio" in claim 2 lacks antecedent basis in claim 1 and in any case a ratio involves two numbers and it is not recited what the "ratio" of crosslinking monomers is a ratio with.

It is not clear what the various parts are based on except for the 1-40 parts of core shell impact modifier and 60-99 parts of polyester or copolyester in that only the basis of the polyester/copolyester and core shell modifier are stated. It is note for instance that the outer layer alone of the core shell modifier may be present at a level of 75 parts, an impossibility given that there are only 40 parts of impact modifier present at most.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kishida et al. (US 4,173,600) in view of Troy et al. (US 6,130,290) or Carson et al. (US 5,321,056).

Kishida et al. discloses a core shell impact modifier having an inner layer "A" which may contain 0-49 parts of monomers such as butadiene (column 4, lines 16-33) and a layer "B" encompassing applicants layer "A-2" which may be comprised of 60-100 percent diene monomer such as butadiene (column 5, lines 24-34). Thermoplastic resins such as polyesters may be added at column 8, lines 28-37 as well as "Sample (30)" of Table 4.

Troy discloses hydroxyl containing impact modified polyesters (abstract) wherein the polyester is chosen to be amorphous for clarity and in which the (column 1, lines 44-57) and which has a refractive index of 1.55-1.60 (patent claim 6).

Carson discloses hydroxyl group containing impact modifiers for amorphous polyesters (abstract). Patentees disclose that use of hydroxyl monomers in the shell increases impact strength at column 5, lines 25-35.

The primary reference does not disclose whether or not their polyesters are amorphous and refractive indices thereof and does not use hydroxyl containing monomers in the shells.

It would have been obvious to a practitioner having an ordinary skill in the art at the time of the invention to use the amorphous polyesters of the secondary references (which inherently have applicants refractive indices) as well as to use hydroxyl monomers in the shells of the primary reference, motivated to extend the advantages of

the secondary references (improved impact strength, clarity etc) to the primary reference absent any showing of surprising or unexpected results.

Claims 1-6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Troy et al.

(US 5,599,894) in view of Troy et al. (US 6,130,290) or Carson et al. (US 5,321,056).

Troy '894 discloses a composition containing impact modifiers and polyesters In which a core shell impact modifier is produced by first polymerizing butadiene to 60-90% conversion and then continuing the polymerization in the presence of additional monomers (column 2, lines 1-21), a process which would result in formation of a polybutadiene core just prior to the second addition of monomers and a layer of 10-40% butadiene on the core as in applicants "A-2".

The primary reference does not disclose whether or not their polyesters are amorphous and refractive indices thereof and does not use hydroxyl containing monomers in the shells.

It would have been obvious to a practitioner having an ordinary skill in the art at the time of the invention to use the amorphous polyesters of the secondary references (which inherently have applicants refractive indices) as well as to use hydroxyl monomers in the shells of the primary reference, motivated to extend the advantages of the secondary references (improved impact strength, clarity etc) to the primary reference absent any showing of surprising or unexpected results.

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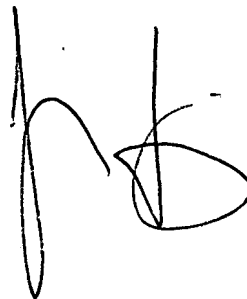
Turner et al. (US 6,287,6566), cited of interest, discloses numerous advantages known in the art for use of amorphous polyesters as compared to crystalline ones. Note column 1 in this re.

Any inquiry concerning this communication should be directed to Jeffrey C. Mullis at telephone number 571 272 1075.

Jeffrey C. Mullis  
Primary Examiner  
Art Unit 1796

JCM

11-6-07

A handwritten signature in black ink, appearing to be 'JCM', located below the printed name of the examiner.